

## CLAIMS

1. An alarm system (10) intended to trigger an alarm signal upon deviation from at least one environment-dependent reference predetermined for a specific environment, which alarm system (10) comprises at least one portable unit (12) intended to be placed in said environment, which unit (12) has a size not greater than a mobile telephone, which unit (12), each comprising a sensor system (14) comprising an accelerometer/silicon crystal, microphone and temperature sensor, a processor member (16) connected to the sensor system (14) and adapted for the comparison of signals received from the sensor system (14) and said predetermined environment-dependent reference/references, a communication member (18) of a unique identity connected to the processor member (16) and adapted for wireless communication upon, for instance, the triggering of an alarm signal, and a positioning member (20) connected to the processor member (16) and adapted to indicate, at least upon the triggering of an alarm signal, the position of said unit (12), which alarm system (10) furthermore comprises a memory member (24) connected to the processor member (16) via a distributed computer network (22) and adapted for the storage of said predetermined reference/references.
- 20 2. An alarm system (10) according to claim 1, **characterized in** that the memory member (24) furthermore is adapted for dynamic and interactive update and development for different purposes by manoeuvring via fixed and/or mobile telephony and/or radio and/or computer unit.
- 25 3. An alarm system (10) according to claim 1 or 2, **characterized in** that each sensor system (14) furthermore comprises at least one of the following sensors: frequency transmitters, strain gauges, camera, UV/photocells, electronic noses, anemometers, infrared sensors, gamma transducers, laser sensors, inductive sensors, flow sensors, level transducers, tension gauges and pressure gauges.
- 30 4. An alarm system (10) according to any one of claims 1–3, **characterized in** that each positioning member (20) consists of at least one of the following units: GPS unit, GPRS unit and GSM unit.

5. An alarm system (10) according to any one of claims 1–4, **characterized in** that said predetermined reference may consist of a sound/vibration image specific to each portable unit (12).

5

6. An alarm system (10) according to any one of claims 1–5, **characterized in** that each unit (12) comprises at least one basic module (12<sub>1</sub>), as well as a protecting cover (12<sub>n</sub>).

10 7. An alarm system (10) according to any one of claims 1–6, **characterized in** that the memory member (24) is adapted for continuous storage of comparisons and/or continuous storage of deviations.

15 8. An alarm system (10) according to any one of claims 1–7, **characterized in** that the memory member (24) consists of a database (24).

9. Method for triggering an alarm signal by means of an alarm system (10) according to any one of claims 1–8, which method comprises the steps of:

- 20 - by means of the sensor system (14) detecting different states comprising vibrations, relative position changes, accelerations and temperature;
- comparing the signals received from the sensor system (14) and at least one environment-dependent reference predetermined for a specific environment and stored in the memory member (24);
- 25 - upon deviation from said environment-dependent reference/references, triggering an alarm signal; and
- according to instantaneous control or predetermined configuration, by means of the communication member (18) of a unique identity, transmitting a message to at least one receiver; and
- 30 - according to instantaneous control or predetermined configuration, by means of the positioning member (20), determining the position of the unit (12); and
- transmitting the position to the receiver/receivers.

10. Method according to claim 9, **characterized in** that the detection step comprises:

- the detection of the different states by means of an accelerometer/silicon crystal, microphone and temperature sensor.

5

11. Method according to claim 10, **characterized in** that the detection step furthermore comprises:

- the further detection of different states by means of the following sensors: frequency transmitters, strain gauges, camera, UV/photocells, electronic noses, anemometers, infrared sensors, gamma transducers, laser sensors, inductive sensors, flow sensors, level transducers, tension gauges and pressure gauges.

10

12. Method according to claim 9–11, **characterized in** that the positioning step comprises:

- the determination of the position by means of at least one of the following units: GPS unit, GPRS unit and GSM unit.

15

13. Method according to any one of claims 8–12, **characterized in** that the method furthermore comprises the step of:

- registering and in the memory member (24) storing the reference/references that may consist of a sound/vibration image specific to each unit (12).

20

14. At least one computer software product (102<sub>1</sub>, ..., 102<sub>n</sub>) directly downloadable in the internal memory of at least one digital computer (100<sub>1</sub>, ..., 100<sub>n</sub>), comprising software code portions for executing the steps according to claim 9 when said at least one product (102<sub>1</sub>, ..., 102<sub>n</sub>) is run on said at least one computer (100<sub>1</sub>, ..., 100<sub>n</sub>).

25

---

30